

Atty Dkt. No.: 10980852-1  
USSN: 10/005,577

### **REMARKS**

#### **Formal Matters**

Claims 31, 33-40, 42-49 and 51-57 are pending after entry of the amendments set forth herein.

Claims 31, 33-40 and 42-52 were examined and rejected.

Claims 31, 33, 35, 40, 43, 48 and 49 are amended and claims 53-57 are new. The amendments to the claims were made solely in the interest of expediting prosecution, and are not to be construed as an acquiescence to any objection or rejection of any claim. Support for the amendments and the new claims is found in the claims as originally filed and throughout the specification, in particular at the following exemplary locations: claims 1, 40 and 44 as originally filed, page 9, lines 1-5 and 16-19 and the final paragraph of page 5. Claim 35 is rewritten to be in independent form.

Accordingly, no new matter is added.

Claim 50 is cancelled.

Applicants respectfully request reconsideration of the application in view of the remarks made herein.

#### **Rejection under 35 U.S.C. §112, first paragraph**

Claims 49-52 are rejected under 35 U.S.C. §112, first paragraph, as containing new matter. The Office asserts that the phrase "homogenous mixture", as recited in claim 49, is not supported in the instant specification.

The Applicants respectfully disagree with this rejection. However, solely to expedite prosecution and without any intention to acquiesce to the correctness of this rejection, claim 49 has been amended to remove the phrase "homogenous mixture".

In view of the foregoing discussion, the Applicants respectfully request withdrawal of this rejection.

#### **Rejection under 35 U.S.C. §112, second paragraph**

Claims 43 and 48 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Without any intention to acquiesce to the correctness of this rejection, claims 43 and 48 have been amended.

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The Applicants respectfully submit that that this rejection has been adequately addressed and may be withdrawn.

**Rejection of claims under 35 U.S.C. § 102 (Klaerner)**

Claims 31, 33-40, 42-50 and 52 are rejected under 35 U.S.C. § 102(e) over Klaerner (U.S. Patent Publication 2002/0001845). Specifically, the Office Action asserts that Klaerner discloses a process for preparing a solid support that anticipates the subject claims. The Applicants respectfully traverse this rejection.

Without acquiescing to the correctness of this rejection, claims 31, 40 and 49 have been amended to recite contacting a *surface reactive hydroxyl, carboxyl, amino or thiol group* with a plurality of monomers, as opposed to contacting a *surface coating* with a plurality of monomers.

As discussed in the response to the prior Office Action, and as acknowledged by the Examiner in ¶ 9 of the Instant Office Action, Klaerner derivatizes his surface reactive hydroxyl groups prior to addition and polymerization of the monomers. As such, Klaerner fails to teach contacting a surface reactive hydroxyl, carboxyl, amino or thiol group with a plurality of monomers, as required by the rejected claims.

In view of the foregoing discussion, this rejection may be withdrawn.

The Examiner argues that Klaerner's ¶ 92 discloses an Initiator containing hydroxyl, carboxyl amino or thiol groups (supported by Klaerner's ¶ 92). However, Klaerner's ¶ 92 relates to initiators for aqueous solution polymerization, not initiators for solid support polymerization. Furthermore, the R groups recited in Klaerner's ¶ 92 are for increasing water-solubility of the initiator and are not used as a reactive site to which monomers are contacted and polymerized.

Finally, the Applicants note that claim 52 is directed to a method in which poly-(vinylamine) is produced. The Applicants respectfully submit that Klaerner's methods cannot be used to produce poly-(vinylamine) and, as such, Klaerner's methods cannot anticipate the subject matter of claim 52.

**Rejection of claims under 35 U.S.C. § 102 (Holmes)**

Claims 31, 33-34, 38, 40, 42-43 and 47 are rejected under 35 U.S.C. § 102(b) over Holmes (USPN 5,550,215). The Applicants respectfully traverse this rejection.

Without any intention to acquiesce to the correctness of this rejection, claim 31 has

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been amended to recite the step of linking a biomolecule to the solid support-bound polymer. A related element is also present in claim 40: "(d) contacting the surface tethered polymer with the probe biomolecule".

Holmes teaches a method in which a cyclic peptide is synthesized on a solid support. The Examiner asserts that the amino acid side chains of the peptide's amino acids represent adsorbing moieties, and, as such, the Examiner argues that Holmes discloses all of the elements of the rejected claims.

As a point of fact, however, Holmes does not disclose that the solid support-bound peptides produced by Holmes' method could be linked to a biomolecule. Accordingly, Holmes fails to disclose an element of claims 31 and 40, and this rejection may be withdrawn.

In other words, at no point in his disclosure does Holmes disclose linking a biomolecule to a solid support-bound polymer (as required by claim 31) or contacting a surface tethered polymer with the probe biomolecule (as required by claim 40). Accordingly, Holmes fails to disclose an element of the rejected claims.

In view of the foregoing discussion, the Applicants respectfully submit that Holmes fails to disclose an element of the rejected claims and, as such, Holmes cannot anticipate the claims. Accordingly, this rejection may be withdrawn.

#### New claims 53-57

New claim 53 recites contacting a plurality of vinyl monomers with a reactive hydroxyl, carboxyl, amino or thiol group present on the surface of a solid support. New claim 53 is believed to be: a) patentable over Klaerner because Klaerner fails to disclose contacting monomers with a surface reactive hydroxyl, carboxyl, amino or thiol group; and b) patentable over Holmes because Holmes fails to disclose vinyl monomers.

New claim 56 recites contacting a plurality of monomers with a reactive hydroxyl, carboxyl, amino or thiol group present on the surface of a solid support *and* linking a solid-support bound polymer to a biomolecule. New claim 56 is believed to be: a) patentable over Klaerner because Klaerner fails to disclose a method in which monomers are contacted with a surface reactive hydroxyl, carboxyl, amino or thiol group; and b) patentable over Holmes because Holmes fails to recite linking a solid support-bound polymer to a biomolecule.

Accordingly, the Applicants respectfully submit that new claims 53-57, like the remainder of the rejected claims, are patentable and should be allowed.

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### CONCLUSION

The Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Timothy Joyce at (650) 485 4310.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078.

Respectfully submitted,

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